



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/961,128	09/21/2001	Marianne Kearney	49138 (71417)	4197

21874 7590 12/28/2004

EDWARDS & ANGELL, LLP
P.O. BOX 55874
BOSTON, MA 02205

EXAMINER

QIAN, CELINE X

ART UNIT	PAPER NUMBER
----------	--------------

1636

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/961,128

Applicant(s)

KEARNEY ET AL.

Examiner

Celine X Qian Ph.D.

Art Unit

1636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6-12 and 15-19 is/are pending in the application.
- 4a) Of the above claim(s) 18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-12 and 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/29/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/7/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Art Unit: 1636

DETAILED ACTION

Claims 1-3, 6-12, 15-19 are pending in the application. Claims 18 and 19 are withdrawn from consideration for being directed to non-elected subject matter. Claims 1-3, 6-12, 15-17 are currently under examination.

This Office Action is in response to the Amendment filed on 10/7/04.

Response to Amendment

The objection to the drawing is withdrawn.

The rejection of claims 1-3, 6-12, 15-17 under 35 U.S.C. 112 2nd paragraph has been withdrawn in light of Applicant's amendment of the claims.

The rejection of claims 1-3, 6-12 and 15-17 under 35 U.S.C. 103 (a) is maintained for reasons set forth of the record mailed on 4/7/04 and further discussed below.

Claims 18 and 19 are withdrawn from consideration for reasons discussed below.

Response to Arguments

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-3, 6-12 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugihara et al., in view of Buttke et al. and Breier et al.

In response to this rejection, Applicants argue that Sugihara describes a cell mitogenic assay using incorporation of ³H-thymidine during the cell cycle as a means of measuring cell proliferation whereas the instant invention provides for a method for testing the survival of cells as measured by a cell viability assay. Applicants argue that these traits are quite different because viable cell are not necessarily undergo mitosis.

Art Unit: 1636

Applicants further argue that Buttke repeatedly distinguishes between the use of the ³H-thymidine assay to measure cell proliferation and the use of the MTS/formazan assay to measure cell viability. Furthermore, Applicants argue that the cell proliferation assay of Sugihara and cell viability assay of Buttke are measuring two different parameters, and Buttke cannot supply the deficiencies of Sugihara. Applicants assert that there is no motivation for one of skill in the art to use stable transfection technique and cell proliferation assay of Sugihara to perform the transient transfection and cell viability assay of the present invention. Applicant assert that there is no suggestion in Buttke that measurement of cell proliferation would be interchangeable with measurement of cell viability, such that Buttke teaches away from Sugihara by emphasizing a marked preference for the need for both tests. Moreover, Applicants argue that Breier cannot supply the deficiencies of Buttke and Sugihara because Breier does not teach measuring cell survival. Applicants further assert that Buttke teaches away from Breier by emphasizing a marked preference for the need for measuring and comparing two different cell parameters. Finally, Applicants assert that there is no motivation in Breier to combine the teaching of Sugihara and Buttke. Applicants thus conclude that the claimed invention is not obvious in view of the cited prior art.

These arguments have been fully considered but deemed unpersuasive. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The examiner agrees that a MTS assay measures cell viability and thymidine incorporation

Art Unit: 1636

assay measures cell proliferation which are two different parameter. However, one ordinary skilled in the art would recognize that measuring one parameter does not excludes one from the measuring other parameter(s). Buttke provides sufficient reasons for combining the teaching because it teaches that it is of particular interest to compare MTS production with thymidine uptake in cell culture. In addition, whether the plasmid is transfected transiently or stably does not impart a structural difference for said plasmid. The endothelial cell proliferation mitogen produced by the plasmid would have been the same, thus the conditional medium from such cultured cells are the same. As such, one of ordinary skilled in the art has sufficient reason to combined the teaching of Sugihara and Buttke and reach the present invention of testing the mitogenic activity of the endothelial cell mitogen encoded by a test plasmid and measure endothelial cell viability when such cells are cultured with the conditioned media that comprises said mitogen. Breier et al. simply teach that Cos-1 cells are capable of being used to express VEGF, a endothelial cell mitogen. Buttke neither teaches away from Sugihara nor Breier because it provides sufficient motivation to combine the teaching of the references. Therefore,

the claimed invention is obvious in view of the combined teaching of Sugihara, Buttke and Breier. This rejection is maintained.

Election/Restrictions

Newly submitted claims 18 and 19 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 18 and 19 are drawn to a method of preparing a plasmid producing biologically active endothelial cell mitogen protein. It is a different invention from the originally elected

Art Unit: 1636

invention, which is directed to a method for testing a plasmid containing a gene encoding for an endothelial cell mitogen for the ability to produce a biologically active mitogen protein. Each method comprises different steps which does not render obvious of each other.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 18 and 19 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Conclusion

No claims are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 1636

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Celine X Qian Ph.D. whose telephone number is 571-272-0777. The examiner can normally be reached on 9:30-6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Remy Yucel Ph.D. can be reached on 571-272-0781. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Celine X Qian Ph.D.
Examiner
Art Unit 1636



DAVE TRONG NGUYEN
PRIMARY EXAMINER